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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,623

01/16/2004

Daniel John Gardner

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04/27/2009

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EXAMINER

BETT, JACOB F

ART UNIT

PAPER NUMBER

2169

MAIL DATE

DELIVERY MODE

04/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/759,623	Applicant(s) GARDNER ET AL.	
	Examiner Jacob F. Bétit	Art Unit 2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10,12-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,12-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/28/09 AND 7/24/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 February 2009 has been entered.

Remarks

2. In response to communications filed on 19 February 2009, claims 1, 10, and 14 have been amended per the applicant's request. Claims 1-7, 9, 10, 12-20, and 22 are presently pending in the application.

Priority

3. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows: The later-filed application must be filed by an inventor or inventors named in the prior-filed application for a benefit claim under 35 U.S.C. 120, 121, or 365(c), and also for a benefit claim under 35 U.S.C. 119(e). This requirement is not met for provisional application 60/440,728 for which there are no inventors in common with the instant application.

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Claim Objections

4. Claims 1-8, 9, 10, 12-20, and 22 are objected to because of the following informalities:

Claims 1, 10, and 14 recite “indexed in response to the location”. It is not clear from the claim if the “location” being referenced is the location of the file in the first environment or the location of the file in the second environment. For the purpose of examining it is assumed that it was meant --indexed in response to the location in the first environment--.

Claims 2-8, 9, 12, 13, 15-20, and 22 are objected to for depending on objected to independent claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masinter (U.S. patent No. 5,742,807) in view of Cohen et al. (U.S. patent No. 6,947,954 B2).

As per Claims 1, Masinter teaches a method of storing information related to a file, comprising:

obtaining content and metadata of the file, wherein the file was stored in a first environment (see column 3, line 62 through column 4, line 22, “an attribute of an original document stored in the repository and a hash computed from that original document”, where the

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document is obtained to produce the hash; and see column 1, lines 16-38, "attribute of a document will be employed as the key or pointer to the location of the document in the file system...");

in a second environment, storing the content and the metadata, wherein the content is associated with the metadata, and wherein the second environment is different from the first environment (see column 4, lines 23-39, "document is identified by the document attribute 14 the hash associated with the attribute will point to the same has in the hash-to-location index and the associated location with that hash will then point to the resident location of the document");

obtaining an attribute of the file in the first environment (see column 3, line 62 through column 4, line 22, "an attribute of an original document"); and

in the second environment, storing the location in a location table, wherein the location table includes at least one of the following: a link to the content, indexed in response to the attribute; and a link to the metadata, indexed in response to the attribute (see column 4, lines 23-39, "when the document is identified by the document attribute 14, the hash associated with the attribute will point to the same hash in the hash-to-location index"); and

reconstituting at least a piece of the file by accessing at least one of the following in the location table: the link to the content, in response to the attribute; and the link to the metadata, in response to the attribute (see column 6, lines 34-47).

Masinter does not distinctly disclose the attribute (metadata) being a location where the file was stored in the first environment.

Cohen et al. teaches this see column 6, lines 50-64. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have

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modified Masinter to include the teachings of Cohen et al. because these teachings would be common file attributes that are known to the system and the user at the time of storing, and would help the system and the user to uniquely identify the file. Using just a document title as suggested in Masinter would cause problems in the case that there are multiple files with the same name. Using other information such as locations helps to solve this problem.

As to claim 14, Masinter teaches a data processing system readable medium having code for storing information related to a file, wherein the code is embodied within the data processing system readable medium, the code comprising instructions for:

obtaining content and metadata of the file, wherein the file was stored in a first environment (see column 3, line 62 through column 4, line 22, “an attribute of an original document stored in the repository and a hash computed from that original document”, where the document is obtained to produce the hash; and see column 1, lines 16-38, “attribute of a document will be employed as the key or pointer to the location of the document in the file system...”);

in a second environment, storing the content and the metadata, wherein the content is associated with the metadata, and wherein the second environment is different from the first environment (see column 4, lines 23-39, “document is identified by the document attribute 14 the hash associated with the attribute will point to the same has in the hash-to-location index and the associated location with that hash will then point to the resident location of the document”);

obtaining an attribute of the file in the first environment (see column 3, line 62 through column 4, line 22, “an attribute of an original document”);

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in the second environment, storing the location in a location table, wherein the location table includes at least one of the following: a link to the content, indexed in response to the attribute; and a link to the metadata, index in response to the attribute(see column 4, lines 23-39, "when the document is identified by the document attribute14, the hash associated with the attribute will point to the same hash in the hash-to-location index"; and

reconstituting at least a piece of the file by accessing at least one of the following in the location table: the link to the content, in response to the attribute; and the link to the metadata, in response to the attribute (see column 6, lines 34-47).

Masinter does not distinctly disclose the attribute (metadata) being a location where the file was stored in the first environment.

Cohen et al. teaches this see column 6, lines 50-64. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Masinter to include the teachings of Cohen et al. because these teachings would be common file attributes that are known to the system and the user at the time of storing, and would help the system and the user to uniquely identify the file. Using just a document title as suggested in Masinter would cause problems in the case that there are multiple files with the same name. Using other information such as locations helps to solve this problem.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4, 6-7, 9-10, 12-13, 15-17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masinter in view of \diamond as applied to claims 1 and 14 above and in further view of Zhu et al. (U.S. patent No. 6,928,526).

As per claim 2, Masinter teaches a metadata hash table (see figures 1 and 2)

Masinter fails to disclose having a content hash table.

Zhu teaches the following:

Col 3 lines 25-35, teaches using a hash of the content to create a segment ID which is stored with the content, thus making the table a hash table using the broadest reasonable definition,

Col 4 lines 25-26 teaches meta data being stored in a metadata hash table.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features of Zhu in Masinter to reduce latency and eliminate unnecessary data replication (see Zhu Col 1, lines 60-67).

As per Claim 3 Zhu as modified, teaches wherein storing the content and metadata comprises:

generating a digital signature from the content (Zhu, Col 3 lines 25-31);

generating a digital signature from the metadata (Zhu, Col 5 lines 23-25);

storing the content in an entry in the content hash table wherein the content's digital signature is an index into the content hash table, so that the content's digital signature is the link to the content (Zhu, Figure 3 Segment ID is an index); and

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storing the metadata in an entry in the metadata hash table wherein the metadata's digital signature is an index into the metadata hash table, so that the metadata's digital signature is the link to the metadata (Zhu, Col 5 lines 23-28).

As per Claim 4 Zhu as modified teaches wherein at least one of the digital signatures is generated using a hashing algorithm (see references for claim 3).

As per Claims 6 and 7 Zhu as modified teaches, both the disclosed tables (see claim 2 rejection) include the segment ID (see Zhu figure 3 and Col 5 lines 21-23) which using the broadest reasonable interpretation is a link between the two tables.

As per Claim 9 Masinter teaches,

Col 5 lines 51-55 teaches the location data stored in a location hash table, and wherein, storing the location comprises:

generating a digital signature from the location; and

storing the location in an entry in the location hash table, wherein the location's digital signature is an index into the location hash table, so that the location hash table is indexed in response to the location by indexing with the location's digital signature.

As per Claim 10,

See claims 1, 2, and 9 rejections, however Masinter fails to teach the storage location of the hash tables, however storing the hash tables in the backup environment is taught by Zhu, as shown in the previous mappings. Also note that mere rearrangement of parts is obvious to one of ordinary skill in the art. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the

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starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); In re Kuhle, 526 F.2d 553, 188 USPQ

7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). As such this storage of the hash tables on the backup server would have been obvious to one of ordinary skill in the art.

As per Claim 12,

The content table contains the segment id, which is a link for a location associated with the content, wherein the location's digital signature is the link to the location. See figure 3.

As per Claim 13,

There is inherently a link between the metadata and a location associated with the metadata as the location hash table is part of the metadata hash table, wherein the location's digital signature is the link to the location.

As per Claim 15,

See Claim 2 rejection.

As per Claim 16,

See Claim 3 rejection.

As per Claim 17,

See Claim 4 rejection.

As per Claim 19,

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See Claim 6 rejection.

As per Claim 20,

See Claim 7 rejection.

As per Claim 22,

See Claim 9 rejection.

9. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,742,870 (Masinter) in view of US 6928526(Zhu) in light of Applicant's admitted prior art (See MPEP 2144.03 C.

As per Claims 5 and 18,

Zhu teaches using a hashing algorithm as discussed above, namely MD5; however, Zhu fails to expressly disclose using SHA1. The applicant has admitted that that SHA1 was well known in the art as it is a standard. Thus, it would have been obvious to one of ordinary skill in the art to use SHA1 as it is an industry standard and would be well known and easy to implement.

Response to Arguments

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new grounds of rejection.

Conclusion

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Bétit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 9:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Jacob F Bétit/
Examiner, Art Unit 2169

jfb
26 Apr 2009